Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Environmental Operations (EO)
Syngenta Crop Protection, Inc.
St. Gabriel, Iberville Parish, Louisiana
Agency Interest Number: 2367
Activity Number: PER20070004
Draft Permit 2718-V2

I. APPLICANT:

Company:
Syngenta Crop Protection, Inc.
P. O. Box 11
St. Gabriel, LA 70776

Facility:
Environmental Operations (EO)
3905 Hwy 75
St. Gabriel, LA 70776
Approximate UTM coordinates are 682.853 kilometers East and 3347.050 kilometers North, Zone 15
SIC Code: 2879

II. FACILITY AND CURRENT PERMIT STATUS:

The Syngenta St. Gabriel Plant manufactures and formulates pesticides and specialty chemicals. Specific processes include: 1) manufacture, formulation, and packaging of s-triazine herbicides, 2) manufacture of hydrogen cyanide, a raw material, 3) manufacture, formulation, and packaging activities for various other pesticides, and specialty chemicals, and 4) supportive activities for the above which include effluent treatment systems, maintenance, utilities, analytical and quality control. Additionally, hazardous and non-hazardous solid waste streams are incinerated in the St. Gabriel Plant multi-purpose rotary kiln incinerator.

Environmental Operations (EO)
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Eight Part 70 permits addressing the facility have already been issued. They are:

Permit #	Units or Sources	Date Issued
2842-V1	Multi-Product Facility	11/30/2003
2897-V0	Packaging Unit	02/25/2005
2904-V1	Herbicide Production Unit	09/15/2005
2931-V0	Micro Manufacturing Unit	04/22/2006
2898-V0	Hydrogen Cyanide (HCN) Facility	11/28/2005
2718-V1	Environmental Operations (EO)	10/02/2006
3045-V0	Inteon Facility	10/02/2006
2610-V2	Utilities Area	02/07/2007

III. PROPOSED PERMIT / PROJECT INFORMATION:

Proposed Permit

A permit application and Emission Inventory Questionnaire was submitted by Syngenta Crop Protection - St. Gabriel Plant on March 2, 2007, requesting a Part 70 operating permit renewal.

Project Description

The proposed modifications are as follows:

1. Incorporate Comprehensive Performance Test (CPT) results for the Multi-Purpose Incinerator;
2. Revise the control efficiencies and emission rates for metals in conformance with the approved NOC;
3. Revise the emission rate and system removal efficiency for hydrochloric acid in conformance with the approved NOC;
4. Increase the volatile organic compound (VOC) maximum hourly emission rate from the Multi-Purpose Incinerator from 2.0 to 10.07 pounds/hour. These additional VOC emissions are from combustion of natural gas during start-up (heat up) and shutdown (cool down) of the incinerator;
5. Add the Compliance Assurance Monitoring (CAM) requirements for Emission Point 3-04, Caustic Scrubber and Emission Point 24701, Lime Storage Silo No. 2;
6. Add one 500 gallon diesel tank per LAC 33:III.501.B.5.A3.; and
7. Add several minor emissions of toxic air pollutants that were previously omitted.

Environmental Operations (EO)
Syngenta Crop Protection, Inc.
St. Gabriel, Iberville Parish, Louisiana
Agency Interest Number: 2367
Activity Number: PER20070004
Draft Permit 2718-V2

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Emissions		
	Before	After	Change
PM_{10}	16.00	10.82	- 5.18
SO_2	17.74	17.74	-
NO_X	106.04	106.14	+ 0.10
CO	32.26	36.16	+ 3.90
VOC	29.22	31.47	+ 2.25

Toxic Air Pollutant Pollutant	Before	After	Change
1,1,1-Trichloroethane	0.015	0.015	-
1,1,2,2-Tetrachloroethane	0.015	0.015	-
1,1,2-Trichloroethane	0.015	0.024	+ 0.009
1,2-Dibromethane	0.015	0.015	-
1,2-Dichloroethane	0.015	0.015	-
1,2-Dichloropropane	0.015	0.015	-
1,3-Butadiene	0.015	0.015	-
1, 3-Dichloropropylene	0.015	0.015	-
1,4-Dichlorobenzene	0.015	0.015	-
1,4-Dioxane	0.015	0.015	-
2,4-Toluene diisocyanate	0.015	0.015	-
2,4-Dinitrotoluene	0.015	0.015	-
2,6-Dinitrotoluene	0.015	0.015	-
2-nitro-Propane	0.015	0.015	-
2,6-Toluene diisocyanate	0.015	0.015	-
Acetaldehyde	0.015	0.015	-
Acetonitrile	0.015	0.015	-
Acrolein	0.015	0.015	-
Acrylamide	0.015	0.015	-
Acrylic Acid	0.015	0.015	-
Acrylonitrile	0.015	0.015	-

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St. Gabriel, Iberville Parish, Louisiana
Agency Interest Number: 2367
Activity Number: PER20070004
Draft Permit 2718-V2

Toxic Air Pollutant Pollutant	Before	After	Change
Allyl Chloride	0.015	0.015	-
Ammonia	1.860	1.085	- 0.775
Aniline	0.015	0.015	-
Antimony (and compounds)	0.015	0.009	- 0.006
Arsenic (and compounds)	0.015	0.006	- 0.009
Barium (and compounds)	0.015	0.061	+ 0.046
Benzene	0.016	0.015	- 0.001
Beryllium (Table51.1)	0.006	0.006	-
Biphenyl	0.015	0.015	-
Bis (2-Chloroethyl) Ether	0.015	0.015	-
Cadmium (and compounds)	0.037	0.037	-
Carbon Disulfide	0.015	0.015	-
Carbon Tetrachloride	0.035	0.035	-
Carbon Sulfide	0.015	0.015	-
Chlorine	0.440	0.440	-
Chlorobenzene	0.152	0.152	-
Chloroethane	0.015	0.015	-
Chloroform	0.109	0.109	-
Chloromethane	0.015	0.015	-
Chloroprene	0.015	0.015	-
Chromium VI (and compounds)	0.003	0.006	+ 0.003
Copper (and compounds)	3.900	0.025	- 3.875
Cresol	0.015	0.015	-
Cumene	0.015	0.015	-
Cyanide compounds	0.00001	0.00001	-
Diaminotoluene	0.015	0.015	-
Dibutyl Phthlate	0.015	0.015	-
Dichloromethane	0.060	0.055	- 0.005
Epichlorohydrin	0.015	0.015	-
Ethyl Acrylate	0.015	0.015	-
Ethylbenzene	0.015	0.034	+ 0.019
Ethylene Glycol	0.398	0.398	-

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St. Gabriel, Iberville Parish, Louisiana
Agency Interest Number: 2367
Activity Number: PER20070004
Draft Permit 2718-V2

Toxic Air Pollutant Pollutant	Before	After	Change
Ethylene Oxide	0.015	0.015	-
Formaldehyde	0.015	0.015	-
Glycol Ethers	0.015	0.015	-
Hexachlorobenzene	0.015	0.015	-
Hexachlorobutadiene	0.015	0.015	-
Hexachloroethane	0.015	0.015	-
n-Hexane	0.029	0.029	-
Hydrazine	0.015	0.015	-
Hydrochloric Acid	0.044	5.94	+ 5.896
Hydrogen Cyanide	0.018	0.018	
Hydrogen Sulfide	0.015	0.015	-
Lead Compounds	0.590	0.037	- 0.553
Maleic Anhydride	0.015	0.015	-
Manganese (and compounds)	2.000	0.141	- 1.859
Mercury (and compounds)	0.040	0.032	- 0.008
Methanol	9.303	9.303	-
Methyl Ethyl Ketone	0.015	0.015	-
Methyl Isobutyl Ketone	0.015	0.015	-
Methyl Methacrylate	0.015	0.005	- 0.010
n-Butyl Alcohol	0.015	0.015	-
Naphthalene	0.015	0.015	-
Nickel (and compounds)	0.440	0.031	- 0.409
Nitrobenzene	0.015	0.015	-
Phenol	0.015	0.015	-
Phosgene	0.015	0.015	-
Phthalic Anhydride	0.015	0.015	-
Polynuclear Aromatic Hydrocarbon	0.015	0.015	-
Propionaldehyde	0.015	0.015	-
Propylene Oxide	0.015	0.015	-
Pyridine	0.015	0.015	-
Selenium (and compounds)	0.015	0.007	- 0.008
Silver	0.950	0.067	- 0.883

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St. Gabriel, Iberville Parish, Louisiana
Agency Interest Number: 2367
Activity Number: PER20070004
Draft Permit 2718-V2

Toxic Air Pollutant Pollutant	Before	After	Change
Styrene	0.015	0.015	-
Tetrachloroethylene	0.015	0.015	-
Thallium	1.050	0.014	- 1.036
Toluene	11.150	11.15	-
Trichloroethylene	0.015	0.015	-
Vinyl Acetate	0.015	0.015	-
Vinyl Chloride	0.015	0.015	-
Vinylidene Chloride	0.015	0.015	-
Xylene	0.015	0.015	-
Zinc (and compounds	0.900	0.035	- 0.865
Total	34.580	30.261	- 4.319

Regulatory Analysis

This permit was reviewed for compliance with the Louisiana Part 70 operating permit program, Louisiana Air Quality Regulations, and New Source Performance Standards (NSPS). NESHAP and Prevention of Significant Deterioration do not apply.

Louisiana Air Quality Regulations and NSPS

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit, or Section X of the Air Permit Briefing Sheet. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the draft permit, or explained in Section XI of the Air Permit Briefing Sheet.

Prevention of Significant Deterioration Applicability

The Environmental Operations is an existing facility. There have been no increases associated with this modification that would trigger PSD review. Therefore, the PSD regulations do not apply.

MACT Requirements

Environmental Operations (EO)
Syngenta Crop Protection, Inc.
St. Gabriel, Iberville Parish, Louisiana
Agency Interest Number: 2367
Activity Number: PER20070004
Draft Permit 2718-V2

The Environmental Operations is subject to 40 CFR 63, Subparts A, DD, and EEE.

Air Modeling Analysis

Air Modeling Analysis is not required.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the draft Part 70 permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the draft Part 70 permit.

IV. Permit Shields

A permit shield was not requested.

V. Periodic Monitoring

See Specific Requirements

VI. Applicability and Exemptions of Selected Subject Items

ID No:	Requirement	Notes
	See Tables X and XI of Air Briefing Sheet	

VII. Streamlined Requirements

Unit or Plant Site	Programs Being Streamlined	Stream Applicability	Overall Most Stringent Program
N/A			

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Glossary

Best Available Control Technologies (BACT) - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

Carbon Monoxide (CO) – A colorless, odorless gas which is an oxide of carbon.

Grandfathered Status- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

Maximum Achievable Control Technology (MACT) - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

New Source Review (NSR) - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_x) - Compounds whose molecules consists of nitrogen and oxygen.

National Emission Standards for Hazardous Air Pollutants (NESHAP) – Toxic air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63.

Nonattainment New Source Review (NNSR) - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Organic Compound - Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

PAI Pesticide Active Ingredient MACT – any facility that is subject to 40 CFR 63 Subpart MMM

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10}- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulphur.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.